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D. Remarks

Claims 1-17 are presented, of which only claim 1 is independent.

On page 2 of the office action, claim 7 is rejected under 35 U.S.C. 112 for lacking sufficient antecedent basis for the limitation "said measuring duct". This claim has been amended by replacing "duct" with "conduit". This new limitation has antecedent basis at line 3 of claim 1.

Claim 1-5 and 7-17 are rejected under 35 U.S.C. 103 as being unpatentable over Bohrer et al. (4,548,078) in view of Jensen et al. (6,085,596). Specifically, the examiner asserts that the Bohrer et al. patent teaches the claimed invention except for explicitly teaching a sealing ring. Instead of the sealing ring, Bohrer et al. use, in the Examiner's view, a seal member arranged between the two housing sections (10, 15) and surrounding the semiconductor chip (20). It is not clear from the Examiner's explanations what this "seal member" of Bohrer et al. is supposed to be, nor do we find any explicit description thereof in Bohrer et al., but one might suppose from the word "bonded" used in column 4, line 44 of Bohrer et al. that it might be some kind of glue between the contacting faces of the housing parts.

In the last paragraph of page 2 of the Action, the Examiner asserts that the seal member arranged between the housing sections (10, 15) of Bohrer et al. is *surrounding* the semiconductor chip. This is obviously not true. If the seal member is some glue arranged between contacting faces of the parts 10 and 15, it will not *surround* the chip in the sense that

it extends *all around* the chip because the seal member obviously does not extend through the openings 18A, 18B. Rather, the seal member merely consists of two parallel stripes, each arranged between one leg of housing part 15 and the surface 11 of part 10. Hence it can at best be said that the chip is arranged between two parallel, strip-shaped parts of the seal member, but it cannot be said that it is *surrounded* by the seal member.

In a next step, the Examiner asserts that it would be obvious to use a sealing ring as disclosed by Jensen et al. This is again not found in the reference documents. As mentioned above, the seal member of Bohrer et al. does obviously not extend through the openings 18A, 18B, hence it is not a ring or anything forming a closed loop. Therefore, it cannot simply be replaced by a sealing *ring*, which necessarily must form a closed loop. If the seal member of Bohrer et al. were replaced by a sealing ring as taught by Jensen et al., the resulting device would have sections of the sealing ring extending through openings 18A, 18B, which is obviously not desirable as it might lead to an at least partial blocking of these openings and disturb the laminar air flow in the air conduit 19.

In addition, we note that the sealing ring of Jensen et al. has a different function from the seal member of Bohrer et al. The sealing ring of Jensen et al. seals each housing part against the semiconductor chip. The seal member of Bohrer et al. seals one housing part against the other housing part.

In fact, Jensen et al. teach away from the present invention in suggesting to seal the housing parts against the flat surfaces of the semiconductor chip, i.e. the sealing ring has to touch

the chip surfaces from above and below, while the claims of the present application say that the sealing ring is to *surround* the chip.

Finally, we note that Jensen et al. disclose a pressure sensor, not a flow sensor and is thus non-analogous art.

Another argument goes to the examiner's rejection of claim 7. That claim says that the conduit is formed by a groove in a surface of at least one of the housing sections and that at least two connecting ducts are provided extending through at least one of the housing sections. The sealing ring surrounds the groove, and the connecting ducts communicate with the conduit. This allows the fluid to enter through one connecting duct, to pass the groove where it is measured, and then to exit through the other connecting duct. The sealing ring around the groove prevents an escape of the fluid from between the housing parts.

The Examiner asserts that claim 7-9 among others are unpatentable over Bohrer et al. in view of Jensen et al. However, neither Bohrer et al. nor Jensen et al. teach to use a sealing ring that surrounds the groove, nor do any of the references teach to connect the connecting ducts to the groove. Jensen et al. merely teach that connecting ducts can be connected to the surface of the semiconductor chip and that a sealing ring can be arranged between the walls of the connecting ducts and the surfaces of the semiconductor chip.

The advantages of the design of claim 7 lie in the fact that, because the inlet and outlet are implemented by the ducts

extending through a housing part, the gap between the housing parts around the groove can be sealed completely by the sealing ring, which results in a very tight and efficient design of the device (see page 2, lines 20-26 of the application).

Finally, we respectfully disagree with the Examiner's arguments against claims 11-13. The claims relate to the spacer or exemplified at 21 in Fig. 4 of the application, stating that there must be such a spacer between the bottom of the recess and the semiconductor chip, the spacer being deformed by a force exerted by the first housing section (1) on the semiconductor chip. The Examiner states that Bohrer et al. teach a flow sensor comprising a plurality of bumps (17) between the semiconductor chip (20) and a bottom of the recess.

However, the recess of Bohrer et al. is arranged in the upper housing part of Fig. 3. Hence, it seems clear that the "bottom" of the recess would be the upper surface of the recess in that figure. The bumps 17, however are arranged between the semiconductor chip and the lower part of the housing, i.e. not between the semiconductor chip and the bottom of the recess. It is not a reasonable interpretation of claim 11 to say that the bottom of the recess (arranged in the second housing part) is to be understood as the surface of the first housing part.

In any event, claim 11 has been amended to render the Examiner's reading of that claim as previously presented moot.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohrer et al. in view of Jensen et al., and further in view of Araki (5,396,795). Claim 6 depends on claim 1 and is

patentable for reasons indicated above. The Araki patent is cited for a disclosure of a flexible support foil and does not make up for the deficiencies of Bohrer et al. and Jensen et al. as a disclosure or suggestion of the invention as defined by independent claim 1. Accordingly, for present purposes, Araki does not go beyond what is shown in Bohrer et al. and Jensen et al.

For the reasons indicated, allowance of the application is respectfully requested.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided above.

Other than the \$110 fee for a one month extension of time, no other fee is deemed necessary in connection with the filing of this Response. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Patent  
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Respectfully submitted,  
COOPER & DUNHAM

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